IN THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the Application:

LISTING OF CLAIMS:

1. (Currently amended) A method for processing a circuit board, the method comprising:

placing a mask layer on the circuit board, the mask layer defining a set of pad profiles for a component mounting location, each pad profile of the set of pad profiles having a set of rounded corners;

forming, for each pad profile of the set of pad profiles, a soldering pad having a set of radii corresponding to the set of rounded corners of that pad profile to create a set of soldering pads for the component mounting location, each soldering pad having the set of radii being configured for a high bond strength solder joint; and

removing the mask layer from the circuit board;

wherein forming, for each pad profile of the set of pad profiles, the soldering pad includes:

etching, as the soldering pad, a surface mount contact having a main portion, and multiple convex lobes integrated with the main portion.

2. (Original) The method of claim 1 wherein each pad profile of the set of pad profiles has multiple rounded corners; and wherein placing the mask layer on the circuit board includes:

configuring masking material over the circuit board, the configured masking material defining, for the multiple rounded corners of each pad profile of the set of pad profiles, curved mask edges having radii in a range between 8 mils and 12 mils.

3. (Original) The method of claim 1 wherein forming, for each pad profile of the set of pad profiles, the soldering pad having the set of radii includes:

etching, as the soldering pad, a surface mount contact having an outer periphery in which every intersection between two substantially straight peripheral edges of the outer periphery has a radius of at least 8 mils.

4. (Original) The method of claim 1, further comprising:

after removing the mask layer from the circuit board, printing solder paste on a top surface of each soldering pad of the set of soldering pads while leaving a periphery of the top surface of each soldering pad of the set of soldering pads exposed;

placing a circuit board component in contact with the printed solder paste; and

applying heat to solder the circuit board component to the set of soldering pads using the printed solder paste.

5. (Original) The method of claim 4 wherein the solder paste substantially consists of flux and lead-free solder, and wherein printing the solder paste includes:

depositing the solder paste substantially consisting of the flux and the lead-free solder over the set of soldering pads.

6. (Original) The method of claim 1 wherein placing the mask layer on the circuit board includes:

configuring masking material over the circuit board, the configured masking material defining, for each pad profile of the set of pad profiles, a set of inward blended curves to define a trace attachment point for a circuit board pad corresponding to that pad profile, each inward blended

curve having a radius in a range between 8 mils and 12 mils.

7. (Original) The method of claim 1 wherein forming, for each pad profile of the set of pad profiles, the soldering pad includes:

etching, as the soldering pad, a surface mount contact that defines a substantially oval shape.

Claim 8 (Canceled).

9. (Original) The method of claim 1 wherein forming includes:

etching, for each pad profile of the set of pad profiles, a surface mount contact that is substantially free of angled radii sharper than 8 mils.

Claims 10-25 (Canceled).

26. (Currently amended) A method for processing a circuit board, the method comprising:

providing a circuit board;

forming a set of pads on the circuit board; and

placing a solder mask layer over the formed set of pads, the solder mask defining a set of solder apertures for the set of pads, each solder aperture of the set of solder apertures having a set of rounded corners configured for a high bond strength solder joint;

wherein placing the solder mask layer includes:

creating a set of surface mount contacts, each surface mount contact having a main portion, and multiple convex lobes integrated with the main portion.

27. (Original) The method of claim 26 wherein each pad is solder mask defined and has at least one solder mask defined straight edge and at

least two solder mask defined radii, and wherein placing the solder mask layer includes:

providing solder mask material that defines, as the radii, rounded corners substantially in a range between 8 mils and 12 mils.

28. (Original) The method of claim 26, further comprising:

printing solder paste substantially consisting of flux and substantially lead-free solder over the set of pads; and

soldering a component to the set of pads using the printed solder paste.

Claims 29-32 (Canceled).

33. (New) The method of claim 1 wherein the main portion of the surface mount contact is rectangular in shape; and wherein etching includes:

providing exactly four convex lobes, each convex lobe protruding from a respective corner of the main portion which is rectangular in shape.

34. (New) The method of claim 26 wherein the main portion of each surface mount contact is rectangular in shape; and wherein creating includes:

providing, for each surface mount contact, exactly four convex lobes, each convex lobe protruding from a respective corner of the main portion of that surface mount contact.